Application No: 10/664,790
Onishi
AU 1753

1. (Currently Amended) A non-magnetic material magnetron sputtering system [for deposition of non-magnetic materials] comprising permanent magnets fastened to [the] a magnetic target surface, that magnetic surface being solely located on the same side of the target as the substrate that is coated with the non-magnetic coating and placed an appropriate distance from the target [facing the substrates at an appropriate distance from the substrates].

2. (Currently Amended) The system of claim 1, wherein the magnets are coated with suitable materials comprising [such as] the target material or a non-contaminating material with respect to the deposited coating [so that] whereby no contaminating materials are deposited on the substrate due to magnetic erosion.

3. (Currently Amended) The system of claim 1, wherein the location of the permanent magnets [are] exposes them directly [exposed] to the plasma [rather than through the thick target].

4. (Currently Amended) The system of claim 1, wherein the permanent magnets are held on [the] a backing plate by a method selected from the group consisting

of magnetic force, adhesive bonding, mechanical means or by a combination of these means.

5. (Original) The system of claim 1, wherein the thickness of the target is not limited.

6. (Currently Amended) The system of claim 1, wherein the surface of the target is a non-planar, machined surface. [that may be for a variety of applications.]

7. (Original) The system of claim 1, wherein there is additionally a water jacket.

8. (Original) The system of claim 1, wherein there are no rotating magnets.

9. (Currently Amended) The system of claim 1, wherein the magnets provide a stable plasma with no abnormal arc discharge and deposition uniformity due to their location [of] on the surface of the target.

10. (Currently Amended) The system of claim 1, wherein [the] plasma feeding and cooling are effected without the use if a high speed motor.

11. (Currently Amended) The system of claim 1, wherein the shape of the magnets provides magnetic flux over [the] an entire erosion pattern [area].

12. (Original) The system of claim 1, wherein the target is laminated to a magnetic backing plate.

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1. (Currently Amended) A non-magnetic material_magnetron sputtering system comprising permanent magnets fastened to a magnetic target surface, that magnetic surface being located on the same side of the target as the substrate that is coated with the non-magnetic coating and placed an appropriate distance from the target.

2. (Currently Amended) The system of claim 1, wherein the magnets are coated with suitable materials comprising the target material or a non-contaminating material with respect to the deposited coating whereby no contaminating materials are deposited on the substrate due to magnetic erosion.

3. (Currently Amended) The system of claim 1, wherein the location of the permanent magnets exposes them_directly to the plasma.

4. (Currently Amended) The system of claim 1, wherein the permanent magnets are held on a backing plate by a method selected from the group consisting of magnetic force, adhesive bonding, mechanical means or by a combination of these means.

5. (Original) The system of claim 1, wherein the thickness of the target is not limited.

6. (Currently Amended) The system of claim 1, wherein the surface of the target is a non-planar, machined surface.

7. (Original) The system of claim 1, wherein there is additionally a water jacket.

8. (Original) The system of claim 1, wherein there are no rotating magnets.

9. (Currently Amended) The system of claim 1, wherein the magnets provide a stable plasma with no abnormal arc discharge and deposition uniformity due to their location on the surface of the target.

10. (Currently Amended) The system of claim 1, wherein plasma feeding and cooling are effected without the use if a high speed motor.

11. (Currently Amended) The system of claim 1, wherein the shape of the magnets provides magnetic flux over an entire erosion pattern.

12. (Original) The system of claim 1, wherein the target is laminated to a magnetic backing plate.